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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,068	10/07/2003	Andrew S. Hildebrant	10030549-1	8619

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EXAMINER

FRISBY, KESHA

ART UNIT	PAPER NUMBER
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3715

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/681,068	Applicant(s) HILDEBRANT ET AL.	
	Examiner Kesha Frisby	Art Unit 3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/6/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

After the amendment filed on 3/6/2006, claims 1-17 are pending. Claims 1, 2 & 14 have been amended.

Double Patenting

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. Claims 1, 3-7, 12 & 17 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-6 & 10-13 of copending Application No.

10/666,024. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented. In addition, the examiner user rationale reasoned from legal precedent that an omission of an element with the consequent loss of its function is deemed obvious. See *In re Kuhle*, 188 U.S.P.Q.7.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This disclosure fails to state or teach one of ordinary skill in the art how billing predictor 104 "uses the required memory to estimate a cost to execute the test vectors". No working examples disclosing the necessary operation have been provided. Without this disclosure, one skilled in the art cannot practice the invention without undue experimentation because of unknown operation of the billing predictor. Since claims 2-7 are dependent on claim 1, claims 9-12 are dependent on claim 8 & claims 14-17 are dependent on claim 13 these claims are also rejected.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. When referring to independent claims 1, 8 & 13, the examiner is unclear as to how the required memory is determined. The applicant uses this claim terminology: "determining a required memory needed to execute the plurality of test vectors". The examiner is also unclear as to how the cost will be estimated. The applicant states within the Specification that different calculations can be used, but does not state any of the methods as to how the cost will be calculated. The applicant uses this claim terminology: "using the required memory to estimate a cost to execute the test

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vectors". Since claims 2-7 are dependent on claim 1, claims 9-12 are dependent on claim 8 & claims 14-17 are dependent on claim 13 these claims are also rejected.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes, Jr. (U.S. Patent Number 4,493,079) in view of Regelman et al. (U.S. Patent Number 6,574,626).**

Claim 1: Hughes, Jr. discloses a method comprising: reading a test file having a plurality of test vectors (column 3 lines 58-61). *Hughes, Jr. does not disclose determining a required memory needed to execute the plurality of test vectors and using the required memory to estimate a cost to execute the test vectors.* However, Regelman et al. teaches determining a required memory needed to execute the plurality of test vectors (column 2 lines 31-34); and using the required memory to estimate a cost to execute the test vectors (*the examiner views this limitation as since the required memory is determined, the estimated cost can be determined. In addition, the estimated cost is determined based on how much memory is required. Since the memory is costly then we the public would know that the estimated cost will also be costly.*) It would have been obvious to one of ordinary skill in the art at the time the invention was made to include determining a required memory and estimating the cost,

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as disclosed by Regelman, incorporated into Hughes, Jr. so that cost effective memory can be used to satisfy the problem.

Claim 2: It is inherent in Hughes, Jr., as modified by Regelman et al., to receive a billing scheme and wherein using the required memory to estimate a cost includes using the billing scheme to estimate the cost to execute the test vectors (*Estimating a cost requires a billing scheme of Regelman et al.*).

Claim 3: Hughes, Jr., as modified by Regelman et al., teaches that determining a required memory comprises determining a required memory needed for each of a plurality of boards (integrated circuit wafer of Regelman et al.) of a tester to execute the test vectors for the board (*column 4 lines 13-19*).

Claim 4: Hughes, Jr., as modified by Regelman et al., teaches that determining a required memory comprises determining a required memory needed for each of a plurality of pins (test points/channels of Regelman et al.) of a tester to execute the test vectors for the pin (*column 4 lines 5-20 of Regelman et al.*).

Claim 5: Hughes, Jr., as modified by Regelman et al., teaches that determining a required memory comprises counting the number of test vectors for each of one or more tests in the test file (*column 2 lines 21-24 of Regelman et al.*).

Claim 6: Hughes, Jr., as modified by Regelman et al., teaches determining a first memory requirement needed for a first pin of a tester to execute the test vectors for a first test in the test file; setting the required memory equal to the first memory requirement; and for each additional pin of the tester, determining a second memory requirement needed for the additional pin to execute the test vectors for the first test;

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and if the second memory requirement is greater than the first memory requirement, setting the required memory equal to the second memory requirement (column 20 lines 50-54 of Regelman et al.).

Claim 7: Hughes, Jr., as modified by Regelman et al., teaches further comprising for each additional test in the test file: for each pin of the tester, determining a third memory requirement for the pin to execute the test vectors for the additional test; and setting the requires memory equal to the third memory requirement if the third memory requirement is greater than the required memory (column 5 lines 16-28 of Hughes, Jr. and column 20 lines 50-54 of Regelman et al.).

Claims 8 & 13: Rejected under similar rationale as set forth in claim 1.

Claim 9: Hughes, Jr., as modified by Regelman et al., discloses further comprising a user interface to display the cost to a user (the examiner views this limitation as since Hughes, Jr. uses a computer, this computer can be used to display the cost; To do so is merely programming).

Claims 10 & 15: Rejected under similar rational as set forth in claim 3.

Claims 11 & 16: Rejected under similar rational as set forth in claim 4.

Claim 12: Rejected under similar rational as set forth in claim 5.

Claim 14: Rejected under similar rational as set forth in claim 2.

Claim 17: Rejected under similar rational as set forth in claim 6.

Response to Arguments

9. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Citation of Pertinent Prior Art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Khoche et al. (U.S. Publication Number 2002/0162066) teaches a test vector compression method and how much memory cost in reference to the equipment.

Pouya et al. (U.S. Publication Number 2002/0184582) teaches the issue of total test cost.

Statovici (U.S. Patent Number 5,825,787) teaches that test vector memory requirements may be extremely large.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kesha Frisby whose telephone number is 571-272-8774. The examiner can normally be reached on Mon. - Wed. 7-3pm, Thu. 6:30-4pm & Fri. 7-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Olszewski can be reached on 571-272-6678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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